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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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PERKINS COIE LLP			FERGUSON, DENISE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/786,346	Applicant(s) GANAPATHY ET AL.	
	Examiner Denise Ferguson	Art Unit 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The following is a non-final office action in response to the communication received on 02/24/2004. Claims 1-29 are now pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 10-11, 17-24, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Ernst (US Patent No. 6591278 B1).

As per claim 10, Ernst discloses a computer network system for monitoring a status of a product design, wherein the product design is encoded in one or more electronic formats, the computer network system comprising:

a plurality of nodes arranged in a hierarchical order, wherein a plurality of nodes at a lowest level of the hierarchical order obtain data on the product design from a plurality of software resources, the plurality of software resources including a human resources tool, an issue tracking tool, and a project planning tool (Figure 4 shows a browser at a lowest level of hierarchical order. col. 3, lines 9-25; The system accepts user updates. col. 5, lines 42-48; The system has utility characteristic of ERP software such as integrating multiple facets of the business and inter-related data, including information regarding company financial and supply chain management. Figure 14, 202; The system extracts and displays issues for issue tracking. col. 5, line 61; the system extracts and displays project management information from a project management tool.);

a plurality of instruction primitives which may be executed in one or more of the nodes, the plurality of instruction primitives including an aggregate instruction for aggregating data received at the plurality of nodes, an extract instruction for retrieving data from the plurality of software resources, and a rule instruction for applying a conditional clause to data received from one or more nodes (Figure 4 shows subsystems or nodes in communication with the integration server. col. 3, lines 54-59; The system enablers collect data from various subsystems and subordinate elements to report aggregated project data).

an event monitor to trigger execution of one or more of the plurality of instruction primitives in one or more of the nodes in response to an event wherein a single node at a highest level of the hierarchical order produces the status of the product design at the occurrence of the event (col. 3, lines 9-25; The system detects user updates from a client node, and the user can view the updated information. Figure 4 shows the integration server at the highest level of the hierarchical order is in communication with the browser. Figure 14 shows a browser user interface displaying the project status, represented by the state of completion of the component design).

As per claim 11, Ernst discloses the computer network system of claim 10 as discussed above, and further discloses the hierarchical order comprises a directed acyclic graph (Figure 4).

As per claim 17, Ernst discloses the computer network system of claim 10 as discussed above, and further discloses that the event monitor is configured to detect asynchronous events (col. 3, lines 9-13; The system detects user updates from a client node. Updates and changes are distributed throughout the system, representing a synchronous event).

As per claim 18, Ernst discloses the computer network system of claim 17 as discussed above, and further discloses asynchronous events include an update to one or more of the software resources (col. 3, lines 33-36; The system can lock data so that users can update the system one at a time, representing an asynchronous event).

As per claim 19, Ernst discloses the computer network system of claim 10 as discussed above, and further discloses an event monitor is configured to detect synchronous events (col. 3,

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line 33; Updates and changes are distributed throughout the system in real-time, representing a synchronous event).

As per claim 20, Ernst discloses the computer network system of claim 10 as discussed above, and further discloses the single node at the highest level of hierarchy is in communication with a User Interface process, such that the status of the product design is displayed on the user interface after the occurrence of the triggering event (Figure 4; The integration server is in communication with the web browser. col. 3, line 41; The browser displays the system user interface).

As per claim 21, Ernst discloses the computer network system of claim 20 as discussed above, and further discloses the user interface comprises a web browser (col. 3, line 41).

As per claim 22, Ernst discloses the computer network system of claim 10 as discussed above, and further discloses the software resources include one or more of an ERP tool, an issue tracking tool, a project management tool, an EDA tool (col. 2, line 6; Ernst discloses an electronic design tool. col. 2 lines 57-61; The system incorporates electronic design software).

As per claim 23, Ernst discloses the computer network system of claim 10 as discussed above, and further discloses the product design is a hardware product design (col. 1, line 13).

As per claim 24, Ernst discloses the computer network system of claim 23 as discussed above, and further discloses the hardware product design is for one or more integrated circuits (col. 13, line 13. col. 1, line 13).

As per claim 27, Ernst discloses the computer network system of claim 10 as discussed above, and further discloses the product design is for a software product (col. 1, lines 13-29; Ernst discloses software as a product requiring and benefiting from the disclosed project data management system).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-9, 12-16, 25-26, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ernst (US Patent No.6591278 B1).

As per claim 1, Ernst discloses a computer network system for facilitating a design of an end product, the computer network system comprising:

a first software tool including one or more designs for the end product, the one or more designs encoded in one or more electronic formats (col. 5, lines 60-61; Ernst discloses the frequent use of a design tool that encodes a design in electronic format in engineering design projects).

a second software tool including Enterprise Resource Planning (ERP) software, the second software tool including one or more fields indicating actual costs incurred in design of the product (col. 5, lines 42-48; The system has utility characteristic of ERP software such as integrating multiple facets of the business and inter-related data, including information regarding company financial and supply chain management).

a third software tool supporting project planning for the end product (col. 5, line 61);

a monitoring component, the monitoring component including software in real-time communication with the first, second, and third software tools, such that the monitoring engine is operative to measure progress of design of the end product in view of the current state received from the first software tool, the second software tool, and the third software tool (Figure 14; The system enables the user to view the current state of the project. The user interface shows the state of design of the project elements as a measurement of progress towards the end product represented by a complete design).

Ernst does not expressly disclose the project planning software tool models a schedule for designing the end product. However, it is old and well known in project management to utilize

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project management tools to model project schedule. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to model a project schedule using the project management tool disclosed by Ernst in order to plan and monitor project status and progress.

As per claim 2, Ernst discloses the computer network system of claim 1 as discussed above, and further discloses the first software tool includes a standard computer aided design (CAD) tool (col. 2, line 16 and col. 2, lines 61-63; The system permits access, integration, and analysis of the information created in one or more different engineering tools, such as a CAD tool);

As per claim 3, Ernst discloses the computer network system of claim 2 as discussed above, and further discloses the CAD tool is a hardware design tool, and the end product includes computer hardware (col. 1, lines 5-14; The invention relates to a system and method for managing the data associated with any type of design project and in particular for managing the data associated with a design project, including hardware design, wherein the data is from different tools. col. 2, line 16; The system incorporates data from CAD tools. col. 13, line 13; The system stores and analyzes data related to circuits, a component of computer hardware).

As per claim 4, Ernst discloses the computer network system of claim 3 as discussed above, but does not expressly disclose the one or more electronic formats includes a hardware design language.

It is old and well-known in design engineering to use a hardware design language such as VERILOG in electronics and computer engineering industries to model electrical systems. In addition, that the claim specifies that VERILOG is the design language does not distinguish the claim over the prior art since the language used does not change the overall functionality of the system. The intended use must result in manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a hardware design language in order to support the design, verification, and implementation of circuits for an electronics design project.

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As per claim 5, Ernst discloses the computer network system of claim 4, but does not expressly disclose the hardware design language includes VERILOG.

VERILOG is an old and well-known design language and is commonly used in the electronics and computer engineering industries to model electrical systems. In addition, that the claim specifies that VERILOG is the design language does not distinguish the claim over the prior art since the language used does not change the overall functionality of the system. The intended use must result in manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize VERILOG in order to support the design, verification, and implementation of circuits for an electronics design project.

As per claim 6, Ernst discloses the computer network system of claim 1 as discussed above, and further discloses the end product includes a software product (col. 1, line 13).

As per claim 7, Ernst discloses the computer network system of claim 1, and discloses that the system integrates project management tools as discussed above, but does not expressly disclose that the project management tools measure progress of the design of the end product towards completion.

However, it is an old and well-known technique in project management to collect and analyze project metrics such as status or progress for data analysis and reporting. Project managers use metrics to develop realistic estimates and plans, to objectively track and communicate project status and to anticipate problems or identify risks. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the project management tools disclosed by Ernst in order to measure project progress and manage the project resources and budget.

As per claim 8, Ernst discloses the computer network system of claim 1 as discussed above, but does not expressly disclose comparing actual progress of design of the end product against planned progress of design of the end product.

However, it is an old and well-known technique in project management to collect and analyze project metrics such as status or progress, and to compare actual to planned values for data analysis and reporting. Project managers use metrics to develop realistic estimates and plans, to objectively track and communicate project status and to anticipate problems or identify risks. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the project management tools disclosed by Ernst in order to measure project progress and manage the project resources and budget.

As per claim 9, Ernst discloses the computer network system of claim 8, but does not expressly disclose a metric for comparison of the actual progress against the planned progress.

However, it is an old and well-known technique in project management to collect and analyze project metrics such as status, progress, and cost as a percentage of estimated planned values for data analysis and reporting. Project managers use metrics to develop realistic estimates and plans, to objectively track and communicate project status and to anticipate problems or identify risks. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the project management tools disclosed by Ernst in order to measure project progress and manage the project resources and budget.

As per claim 12, Ernst discloses the computer network system of claim 10 as discussed above, and further discloses a plurality of servers in communication via a network (col. 4, lines 21-23), but does not expressly disclose that each of the plurality of software sources operates on a distinct server.

However, that the claimed system is implemented with software sources operating on a distinct server does not distinguish the claim over the prior art since the intended use does not change the overall functionality of the system. The intended use must result in manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Accordingly, it would have been obvious to one of ordinary

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skill in the art at the time of the invention to include software sources operating on a distinct server in order to enhance system performance.

As per claims 13 and 14, Ernst discloses the computer network system of claim 12 as discussed above, and further discloses that the network at least partially includes a local area network and at least partially includes a wide-area network (col. 2, lines 65-66).

As per claim 15, Ernst discloses the computer network system of claim 14 as discussed above, but does not expressly disclose that the network communication protocol is TCP/IP.

However, TCP/IP is an, old and commonly used communication protocol in the network engineering field and is the basic common language of the Internet. The use of TCP/IP would facilitate communication among distributed systems in a network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the network system using TCP/IP in order to facilitate efficient communication between distributed system components.

As per claim 16, Ernst discloses the computer network system of claim 12 as discussed above, and further discloses a plurality of nodes distributed amongst the plurality of servers (col. 4, lines 21-24).

As per claim 25, Ernst discloses the computer network system of claim 24, and further discloses that the frequent use of a design tool that encodes a design in electronic format in engineering design projects (col. 5, lines 60-61), but does not expressly disclose that the product design is encoded in a hardware design language.

VERILOG is an old and well-known hardware design language and is commonly used in the electronics and computer engineering industries to model electrical systems. In addition, that the claim specifies VERILOG as the design language does not distinguish the claim over the prior art since the language used does not change the overall functionality of the system. The intended use must result in manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a hardware design

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language such as VERILOG in order to support the design, verification, and implementation of circuits for an electronics design project.

As per claim 26, Ernst discloses the computer network system of claim 25 as discussed above, but does not expressly disclose that the hardware design language is VERILOG.

VERILOG is an old and well-known hardware description language and is commonly used in the electronics and computer engineering industries to model electrical systems. In addition, that the claim specifies VERILOG as the design language does not distinguish the claim over the prior art since the language used does not change the overall functionality of the system. The intended use must result in manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize VERILOG in order to support the design, verification, and implementation of circuits for an electronics design project.

As per claim 28, Ernst discloses a method of monitoring an electronic design project, the method comprising:

upon the occurrence of one or more triggering events, extracting parameters on the electronic design project from two or more software resources, the two or more software resources including an issue tracking tool, a project management tool, and an ERP tool (col. 5, line 61; the system extracts and displays project management information from a project management tool; Figure 14, 202; The system extracts and displays design issues for issue tracking);

Ernst does not expressly disclose determining an actual development or an estimated cost of the design project; from one or more of the extracted parameters, determining progress of the design project as a percentage, and comparing the actual development cost, as a percentage of the estimated cost, to the percentage of the progress of the design project.

However, it is an old and well-known technique in project management to collect and analyze project metrics such as status or progress and cost as a percentage of estimated planned values for data comparison, analysis and reporting. Project managers use metrics to develop realistic

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estimates and plans, to objectively track and communicate project status, and to anticipate problems or identify risks. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a project metrics as discussed in claim 28 in order to provide historical data to help plan and predict future projects and provide baseline information for projects to support decision-making.

As per claim 29, Ernst discloses the method of claim 28 as discussed above, and further discloses displaying project data on a user interface (Figure 14 shows project data displayed on a user interface).

Ernst does not expressly disclose that the user interface displays results of the comparing the actual development cost.

However, it is an old and well-known technique in project management to collect and analyze project metrics such as status or progress and cost as a percentage of estimated planned values for data analysis and reporting as discussed above. In addition, a user interface to display project management information is an old and well known feature of project management tools. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use project metrics for project planning and reporting in order to identify and mitigate project risks.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - Rostoker et al. (US Patent No. 5933356) discuss a system and method for creating and validating an electronic design.
 - Janiszewski (Publication No. 2001/0025267 A1) discusses a metric collection method that facilitates project management.
 - Kudo et al. (Publication No. 2004/0205657 A1) discusses a data linking method for use in design development work.
 - Perrin, B. (1999). Web-Based Circuit Engineering. *Circuit Cellular INK*, 104, 1-6.

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- Hyde, D. (1997). CSCI 320 Computer Architecture Handbook on Verilog HDL. Computer Science Department, Bucknell University, 4.

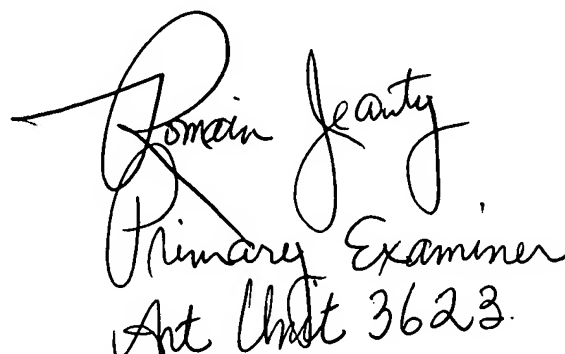
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise Ferguson whose telephone number is (571) 272-6392. The examiner can normally be reached on Monday - Friday 8 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DF

07/28/2006


Romain Leanty
Primary Examiner
Art Unit 3623